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## HOME PREPARATION OF VELVA FRUIT--A NEW FROZEN FRUIT DESSERT

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The announcement of a commercial method for making Velva Fruit, a delicious frozen dessert, immediately drew requests for directions for making it in the home. The following preliminary report was designed to meet this need until more research can be done cooperatively between the Bureau of Agricultural and Industrial Chemistry's Western Laboratory, which developed the commercial side of this work, and the Bureau of Human Nutrition and Home Economics, which is working on home preparation.

Working on the commercial phase, the Western Laboratory has developed a process whereby the puree of fruits can be combined with other ingredients and frozen in ice-cream manufacturing equipment to produce this new and attractive dessert, which has been named Velva Fruit. It consists of puree of fruit, sugar, a small amount of gelatin, and for some fruits, a small amount of acid flavor. It differs from ices and sherbets in that it contains more fruit and no milk solids.

Preliminary tests show that Velva Fruit can be made in the home in either the ordinary hand-operated freezer or the freezing compartment of the household refrigerator. The chief problem is texture--that is, the avoidance of coarse ice crystals. The most important factors are: (1) handling the puree and the mix so as to prevent loss of flavor, color, and nutritive values, (2) combination of ingredients in proportions that give a smooth texture and pleasing flavor, and (3) proper operation of the freezing and hardening equipment.

### Type and Variety of Fruit to Use

Almost any fruit with a pronounced flavor can be used in Velva Fruit. Good desserts have been made with strawberries, raspberries, blackberries, loganberries, youngberries, boysenberries, Cascade and Pacific blackberries, plums (particularly the red-fleshed varieties such as the Santa Rosa, which can be crushed without becoming brown), cantaloupes, apricots, and pears. Cherries and prunes provide good flavors but frequently require special treatment to prevent darkening.

### Preparation of Puree

The fruit must be washed and large-seeded fruits must be pitted. Crushing and straining can be accomplished by forcing the fruit through a screen or a potato ricer. The crushed fruit or puree should include the fine pulp but not coarse fiber or small seeds such as those of berries.

Fruits that tend to darken when crushed can be scalded to prevent loss of natural color. This is done by immersion of the whole fruit in boiling dilute sugar sirup (about 10 percent sugar) for a short time. Two to 3 minutes is sufficient for whole Royal Anne cherries. Apricots and halved peaches require 4 to 5 minutes. The sirup can then be used for other purposes, such as canning, to avoid

waste. Prunes tend to darken, but since their flavor is changed by heating, scalding is not recommended. The darkening of prunes and light-fleshed plums can be reduced if they are kept in a refrigerator until just before they are crushed. After it has been pureed, the fruit should be frozen without delay.

The fruit puree or the mix can be kept frozen in a locker so that the dessert can be prepared when fresh fruit is not available. The vitamin C in the fruit, particularly in berries, will be retained better if sugar is added to the puree before it is frozen. Packages such as tin cans, glass jars, heat-sealed cellophane envelopes, or waxed cardboard containers can be used. The storage temperature should be 0° F. or lower.

#### Defrosting Stored Puree or Mix

If either the puree or mix has been stored, defrosting is necessary and should be done carefully. Puree containing sugar will defrost more quickly than that without added sugar. For best results the puree or mix should be defrosted in a refrigerator maintained at about 40° to 45° F., or in a cool room. The vitamins, flavor, and color will be retained better if the puree or mix is not allowed to reach room temperature. The darkened layer that may develop on the top of some puree during defrosting is not harmful. This darkening is the same as the natural browning of the cut surface of an apple and does not indicate contamination.

#### Preparation of Mix

Tart fruit such as berries and plums will not require added acid flavoring. The recipe for about one quart of mix for such fruit is as follows:

Crushed fruit	1-1/2 lbs. or 3 cups
Sugar	10 oz. or 1-1/4 cups
Household gelatin	1/3 to 1/4 or 1 tablespoon
Water, cold	2 oz. or 1/4 cup
Salt	1/4 teaspoon

Fruits with less acid, such as pears, cantaloupe, peaches, apricots, etc., require a slightly different formula. Less sugar is required, and citric acid or preferably lemon juice is added. The recipe for about one quart of mix or two quarts of Velva Fruit is as follows:

Crushed fruit	1-1/2 lbs. or 3 cups
Sugar	8 oz. or 1 cup
Household gelatin	1/3 to 1/4 oz. or 1 tablespoon
Water, cold	2 oz. or 1/4 cup
Lemon juice	1/3 cup
Salt	1/4 teaspoon

Mix together the fruit puree, sugar, salt and lemon juice if used. Keep puree mix cool and avoid excessive mixing in order to preserve the ascorbic acid. Soften gelatin in the cold water. Dissolve thoroughly by heating to 180° F. over boiling



water (takes about 5 min.), add dissolved gelatin to fruit-sugar mixture stirring to prevent formation of stringy lumps of gelatin. Then freeze the mixture as explained below or pour into water-vapor-proof containers and freeze in home freezer or locker plant.

#### Freezing in a Hand Freezer

Because of the high sugar content of Velva Fruit, freezing is slower than for ice cream. Fifteen to 20 minutes of turning is sometimes necessary. The turning should be continued until the mix has nearly doubled in volume. For freezing use 1 part salt to 8 parts ice.

The dasher is then removed from the freezer and the dessert hardened in the same way as ice cream is hardened. Since Velva Fruit tends to be somewhat softer than ice cream, a somewhat lower temperature is desirable during the hardening. To lower the temperature, increase the proportion of salt in the ice-salt freezing mixture. Excess water should be drained off and salt and ice added in a ratio of 3 parts of ice to 1 part of salt. Or pack Velva Fruit at once in water-vapor-proof containers and store in the home freezer or locker plant.

Velva Fruit can also be hardened in the freezing compartment of an electric refrigerator, but may not become as firm as in the ice cream freezer.

#### Freezing in an Electric Refrigerator

It is possible to make Velva Fruit in the freezing trays of an electric refrigerator. An electric household beater is used to whip the mix after it has been frozen overnight in the trays. The product will have a fine flavor but the texture will not be so smooth as that produced in a hand freezer.

The formula is the same as for the hand freezer. The mix is frozen overnight in trays of the refrigerator, which is set for its lowest temperature. The mass is then broken into small chunks with a spoon and immediately beaten in a chilled bowl. When the mass has been whipped up well it is returned to the freezing compartment. The whipping not only increases the volume but lightens the fruit color, and should be continued long enough so that no coarse ice crystals remain. The mix should not become warm. In experiments with a household refrigerator, the mix reached 16° F. when held overnight in the freezing compartment and rose to 23° F. during the whipping at room temperature. One quart of mix will produce about 1-1/2 quarts of Velva Fruit when prepared in this way.

#### Serving Without Hardening

Velva Fruit can be served "soft-frozen" just as it comes from the ice cream freezer. Desserts made from some fruits have slightly better flavor when soft-frozen than when hardened. This difference is appreciable with peaches and certain berries.

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Persons desiring information on the commercial manufacture of this new dessert should write the Western Regional Research Laboratory, Albany 6, California, for AIC-40, "Velva Fruit--A New Frozen Fruit Dessert."

